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EX PARTE OR LATE FILED

November 18, 1998

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Mrs. Magalie Roman-Salas
Office of Secretary
Federal Communications Commission
TW-A325
445 12th Street SW
Washington, DC 20554

Re: NOTICE OF EX PARTE PRESENTATION IN MATTER OF CCB 98-146 (NOI)

Dear Mrs. Roman-Salas:

Additional reference is made to Federal Communications Commission ("FCC") Docket Number 98-187 as it relates to Advanced Telecommunications Services.

In response to a verbal request from the FCC, and with the advance approval of the FCC, the following employees of Alcatel USA, Inc. met with members of the FCC staff on November 18, 1998, at FCC office facilities located at 1919 M Street, NW, Washington, DC, and made an ex parte presentation:

Mr. David W. Owen, VP, Government Relations
Mr. Dennis Kline, Manager, Business Development, Access Division

The FCC Staff members who participated in the meeting and who each will receive copies of this notice and disclosure are:

Mr. Johnson Garrett, OPP
Mr. Alexander de Neufville Byron, WTB
Mr. Joseph Levin, WTB
Ms. Jennifer Fabian, CCB
Mr. Sunil Daluvoy, CSB
Mr. John Williams, OPP

The purpose of the meeting is addressed in the attached disclosure. If you have any questions about the meeting or the disclosure, please do not hesitate to contact me at (703) 724-2930.

Sincerely yours,

David W. Owen
Vice President – Government Relations

Attachments: Disclosure with Exhibits

Cc: Mr. Johnson Garrett, OPP
Mr. Alexander de Neufville Byron, WTB
Mr. Joseph Levin, WTB
Ms. Jennifer Fabian, CCB
Mr. Sunil Daluvoy, CSB
Mr. John Williams, OPP

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Alcatel USA, Inc
Government Relations Office
44983 Knoll Square Ashburn, VA 20147
Phone: (703) 724-2930 Fax: (703) 724 2948

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Inquiry Concerning the Deployment	)	
of Advanced Telecommunications	)	
Capability to All Americans in a	)	
Reasonable and Timely Fashion,	)	CC Docket 98-146
and Possible Steps to Accelerate	)	
Such Deployment Pursuant top	)	
Section 706 of the	)	
Telecommunications Act of 1996	)	

DISCLOSURE OF EX-PARTE PRESENTATION

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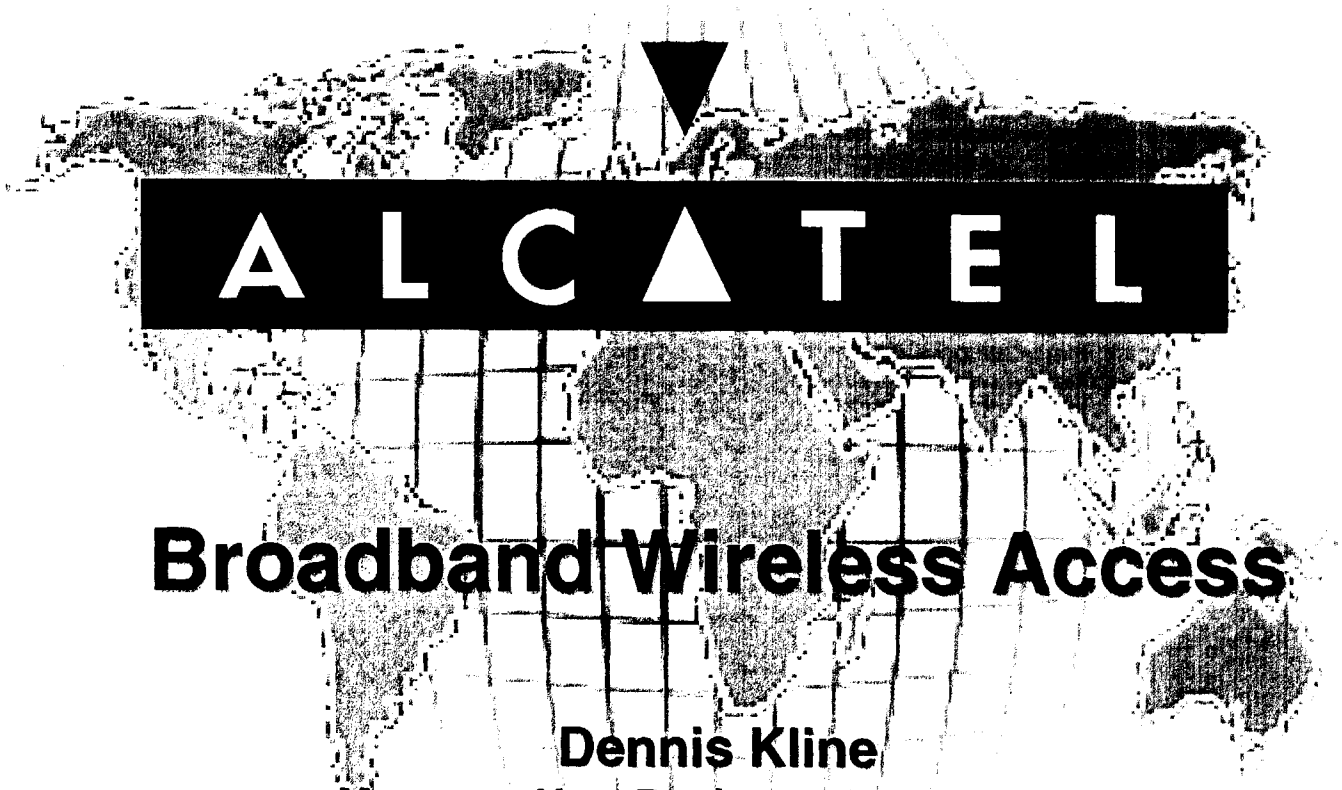
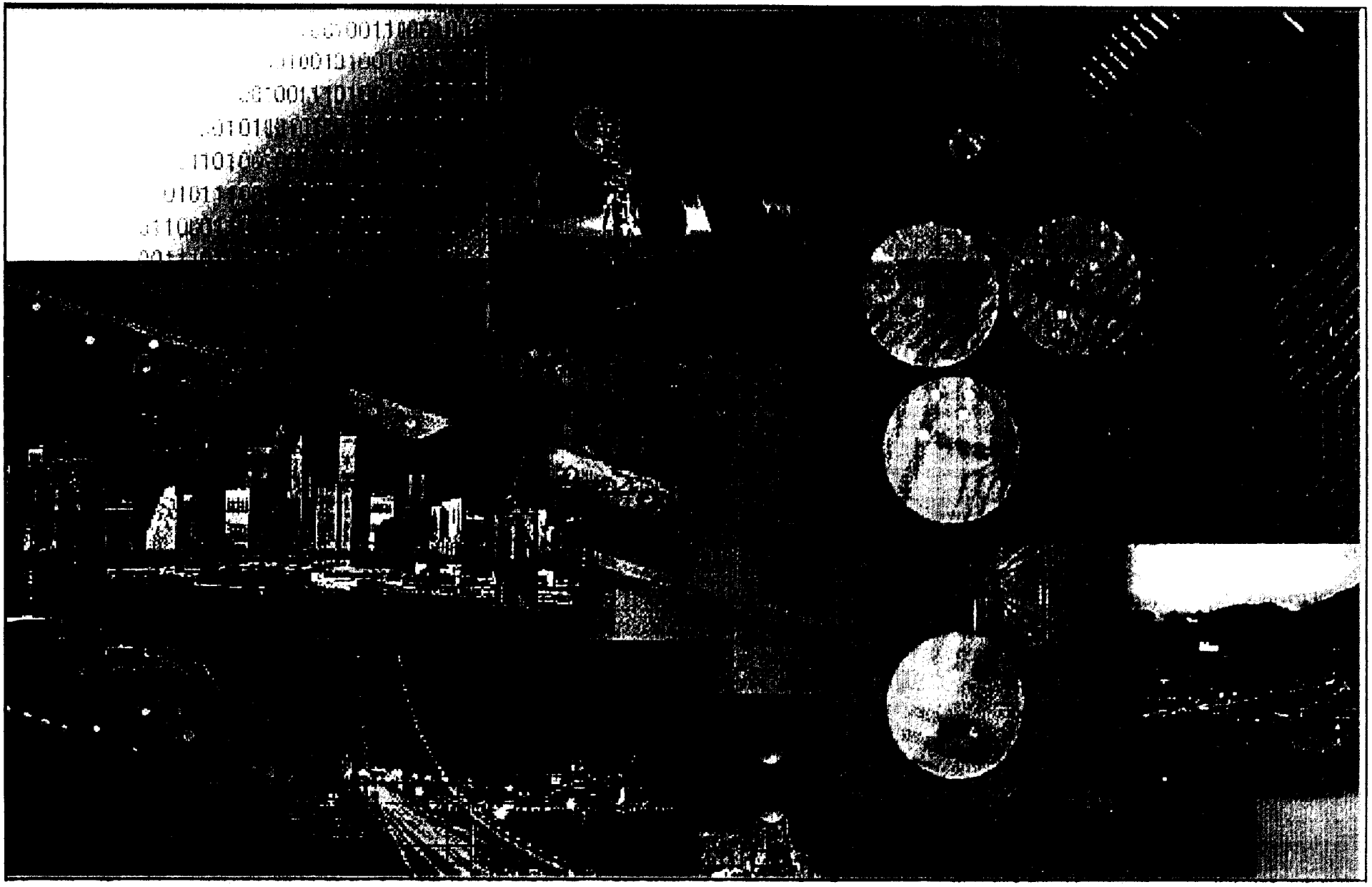
The primary purpose of the presentation was to discuss the business aspects of the deployment of advanced telecommunications services using LMDS as the implementing technology. The discussion included an overview of the technology, emphasizing its strengths and weaknesses, as well as a comparison with the competing broadband technologies of xDSL, fiber optic, satellite, and cable. The economics of a service provider deploying LMDS versus competing technologies was analyzed in some detail. Particular attention was paid to current LMDS commercial deployments and field trials and what the target markets of LMDS operators are. One conclusion was that no single technology appears to be suitable to address the entire range of subscriber and business requirements for advanced telecommunications services.



Broadband Wireless Access

Dennis Kline
Manager, New Business Development
Fixed Wireless Access

Local Multi-Point Distribution Service



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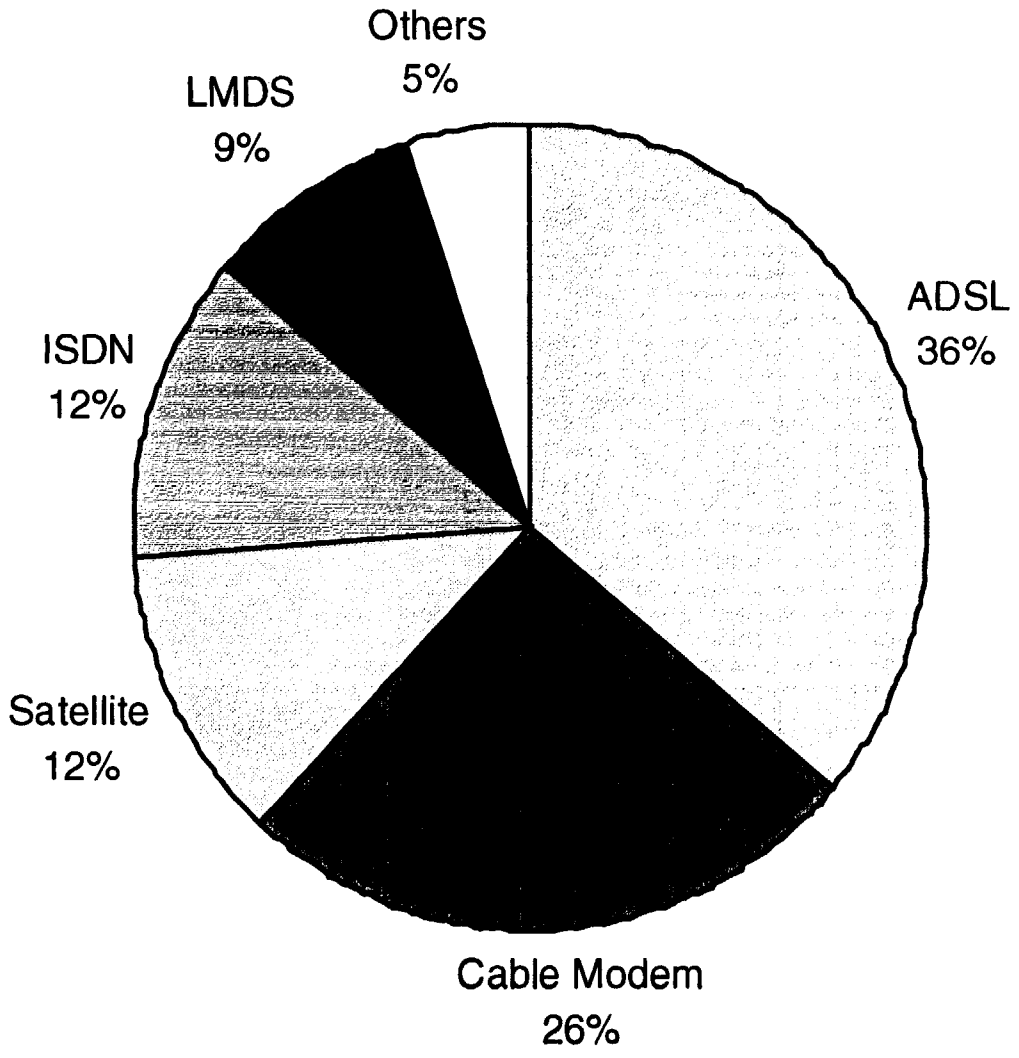
Broadband Subscribers by Technology (2003)



Source: Allied Business

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Background

- LMDS seen as a low-cost alternative to fiber in the race to deliver broadband data and telephone services to businesses and consumers

- Offers a way of entry for new entrants who have no existing facilities (only 10% targeted office buildings have fiber today)

- Drivers include the internet (internet hosts have doubled every 12-18 months while two way interactive multimedia is rapidly progressing)

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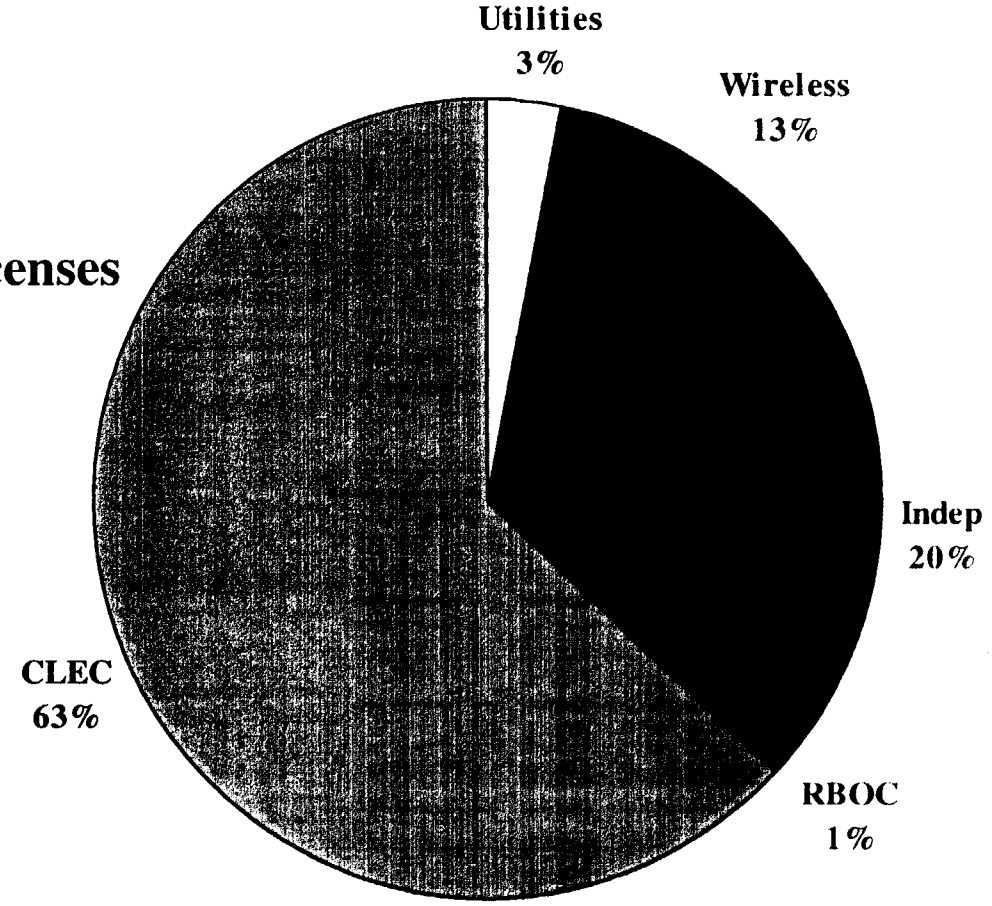
The Winners

- 210 application received
- 130 eligible bidders
- 493 BTAs auctioned
- 2 licenses per BTA = 986 licenses
- 122 licenses were not sold

  (re-auctions on April 27, 1999)

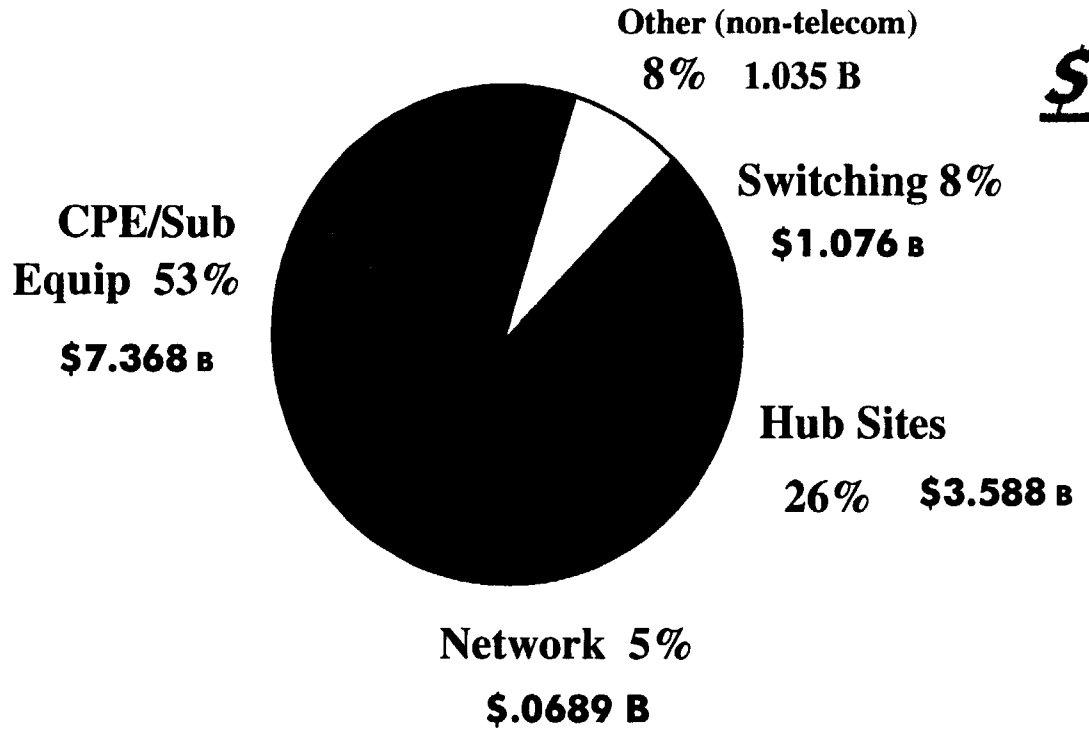


104 total winners

LMDS Capital Exp. Forecast

10 Year Capital Outlay

$13.8 Billion



SOURCE: Hardin & Assc. 5/97

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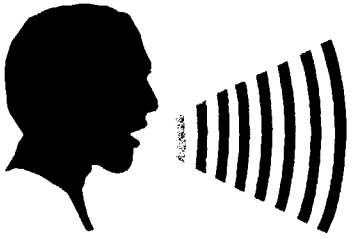
LMDS Projected Revenues

- Revenues : $ 6.5 Billion by 2007
- 75% revenues from business with < than 10 employees
- Estimated 4.6 million commercial buildings, only 1% served by fiber
- By end of 1998, BBRA revenues will = approx $ 96 Million
- SOHOs will account for aprox $ 37 Million of that $96M

SOURCE: Pioneer Consulting - August 1998

LMDS Service Offerings



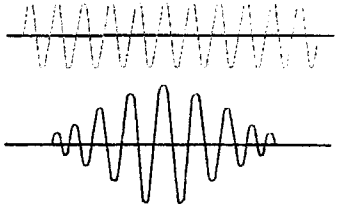
Voice

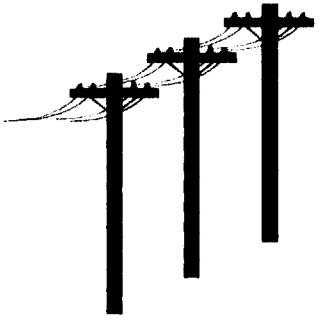
LAN / WAN

Video

Internet

Entertainment





Broadband Benefits

10 Meg - 46 Minutes

S
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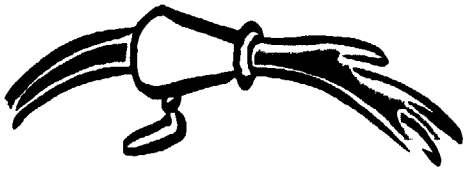
o
w

PSTN

10 Meg - 11 Minutes



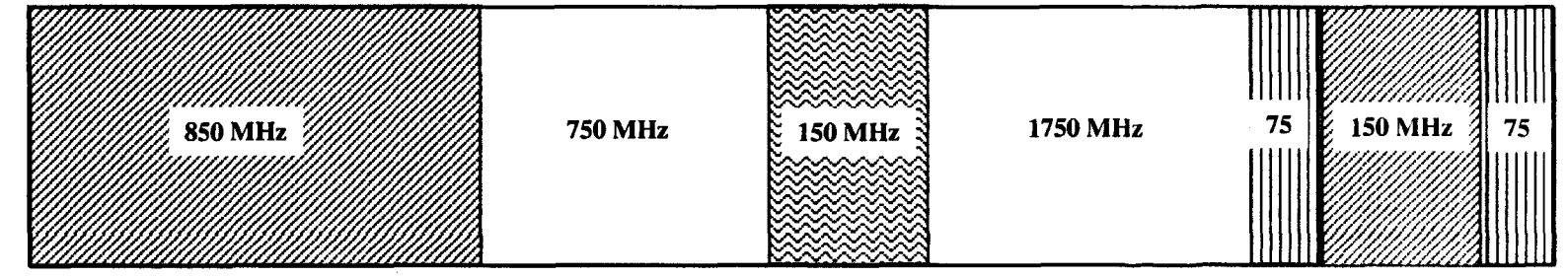
ISDN

10 Meg - 1.3 Minutes

BBRA

LMDS Frequency Plan

Asymmetrical Channel Plan



Hub to
CPE Only

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Spectrum Issues

- **Coordination is mandatory for hub-to-subscriber links within 75 miles of a non-GSO-MSS licensee. LMDS systems must accept interference**

- **Subject to EIRP, Tx Power limitations & border limitations**

- **Coordination is mandatory for hub-to-subscriber links within 20km of an existing Local Television Transmission Service link**

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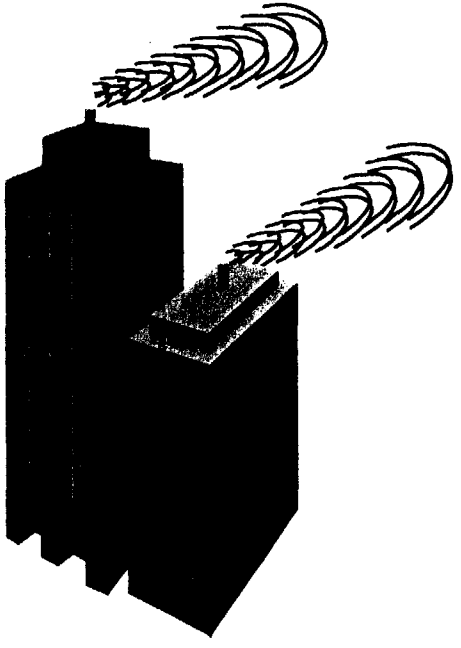
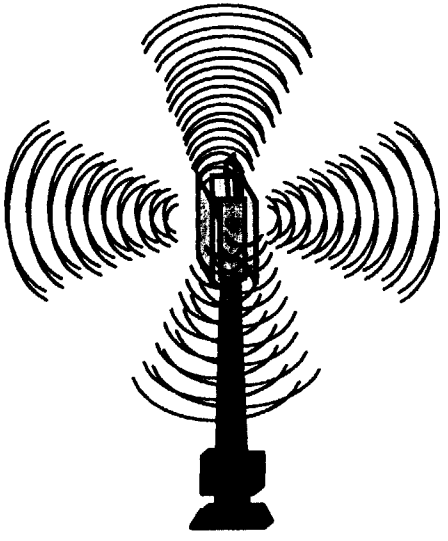
Spectrum Issues

- Licenses are valid for 10 years (10 years to build out service to 20% population)
- 3 year restriction on incumbent LEC and cable companies (A Block)
- Spectrum can be used for whatever service license holders want to offer
- Partitioning and disaggregation is allowed
- No restrictions on channelization = no industry standardization or guidelines

High Speed Data and Voice

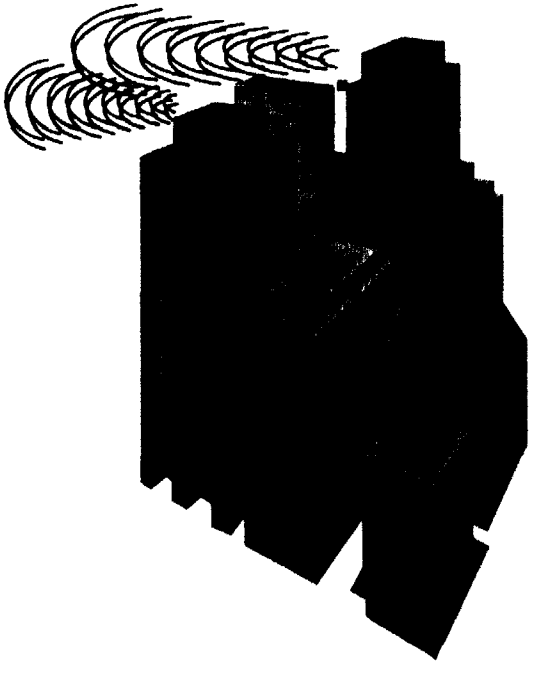
Small to Medium Businesses & Apartments



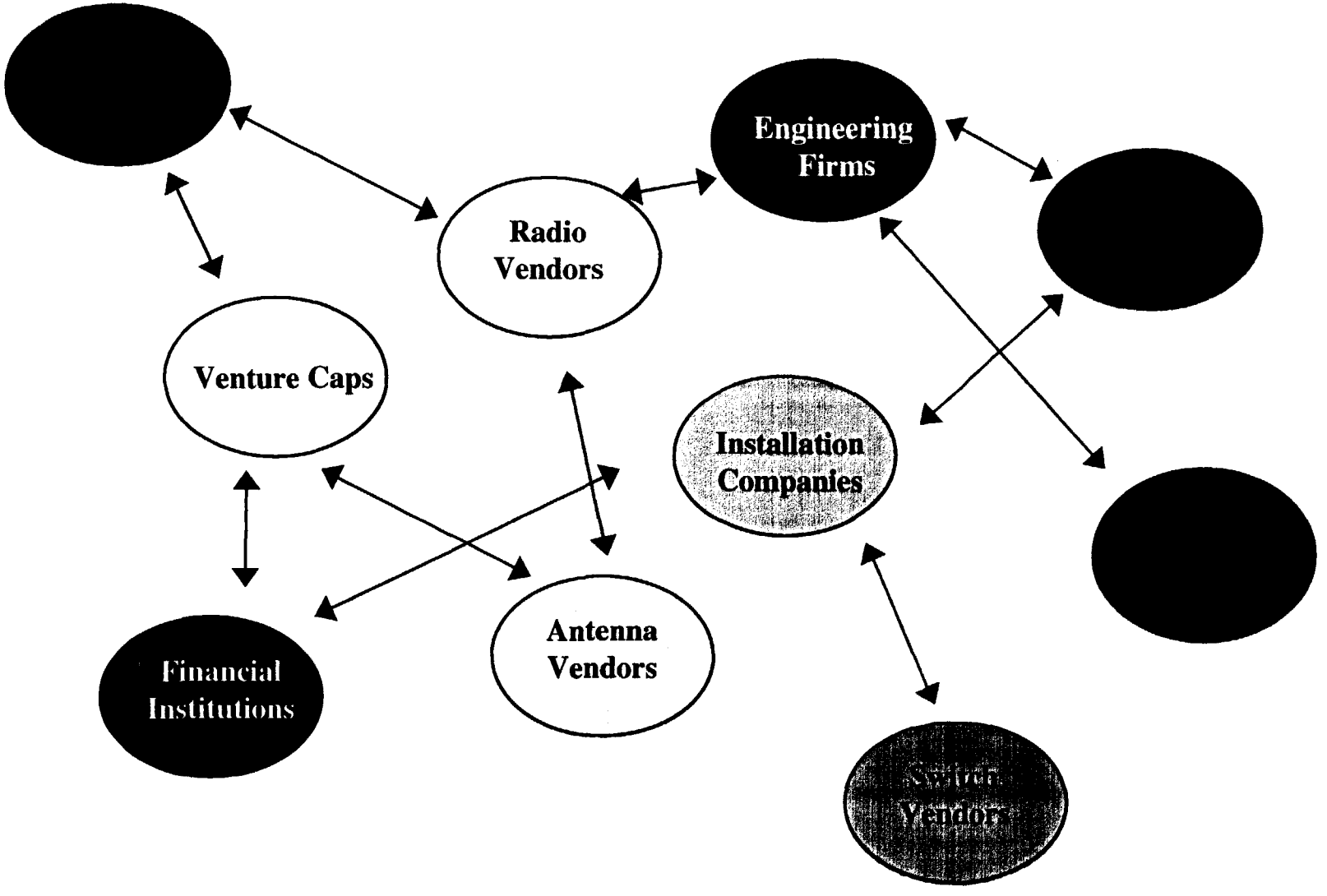


9900WW

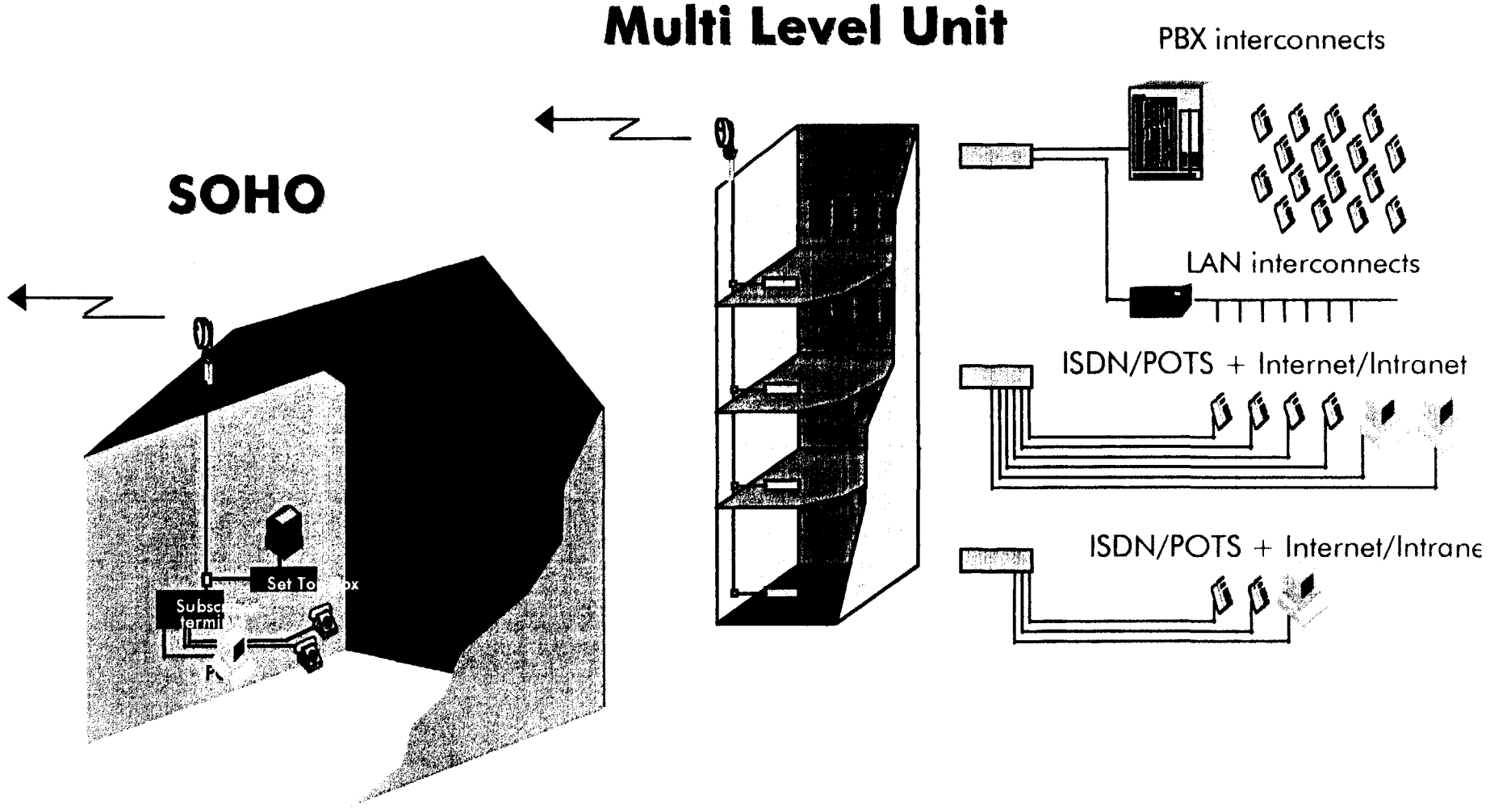
Medium Businesses Apartments



Strategic Relations

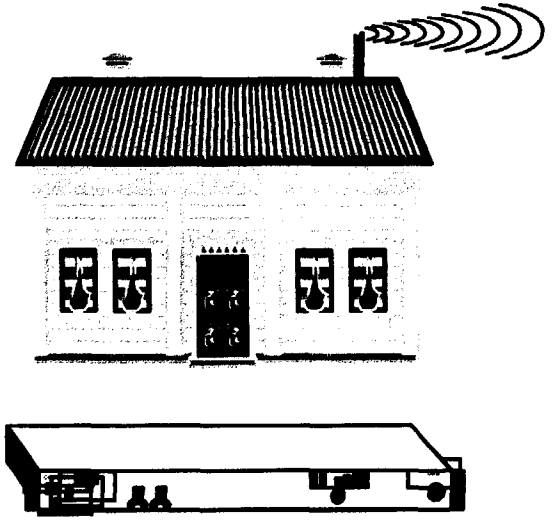


Multiunit Applications



Multi - Applications

SOHO or **Telecommuter**



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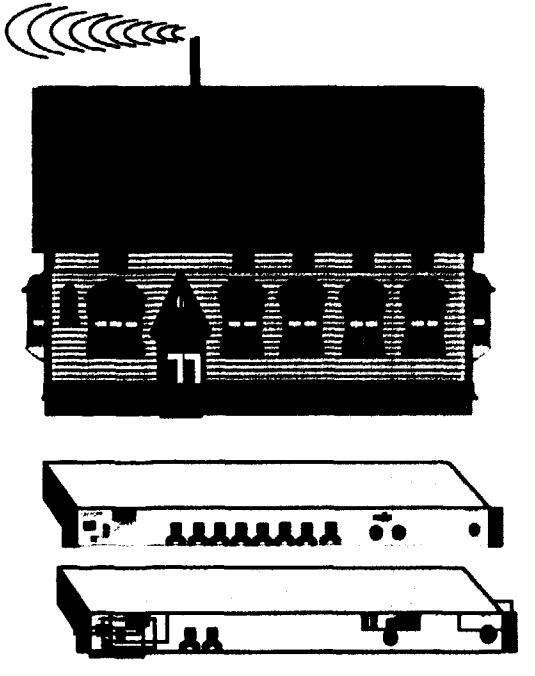
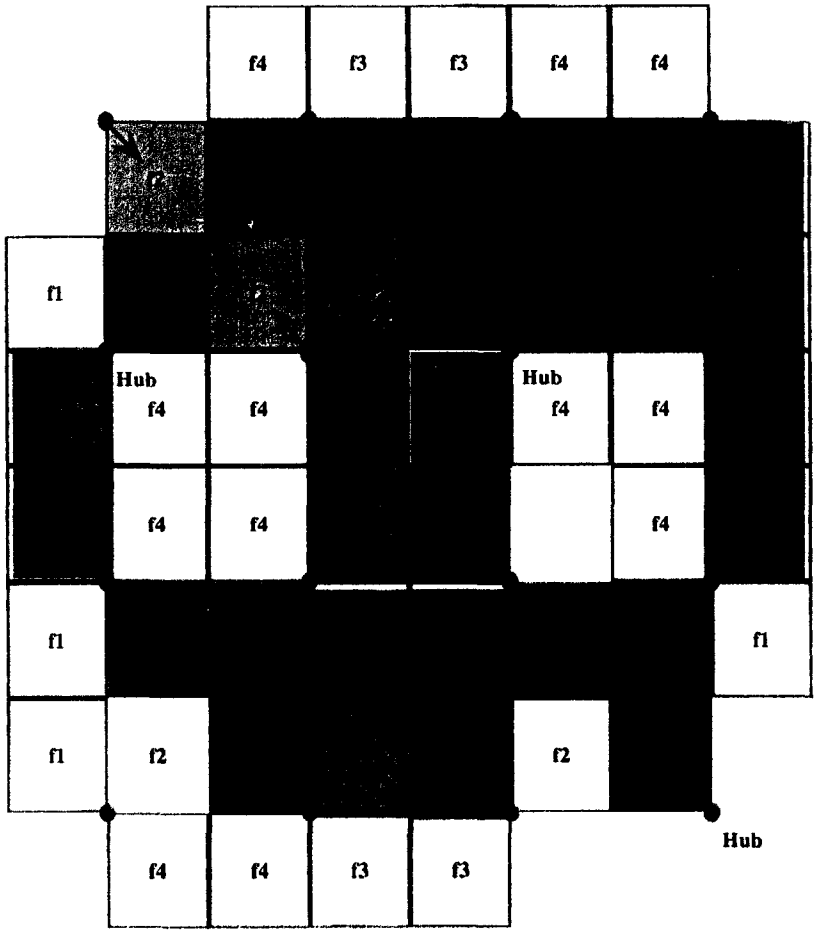
Medium Business



Multiple POTS **Fractional T1** **ISDN**

Multiple T1 **Multiple LAN** **DAVIC Compliant**

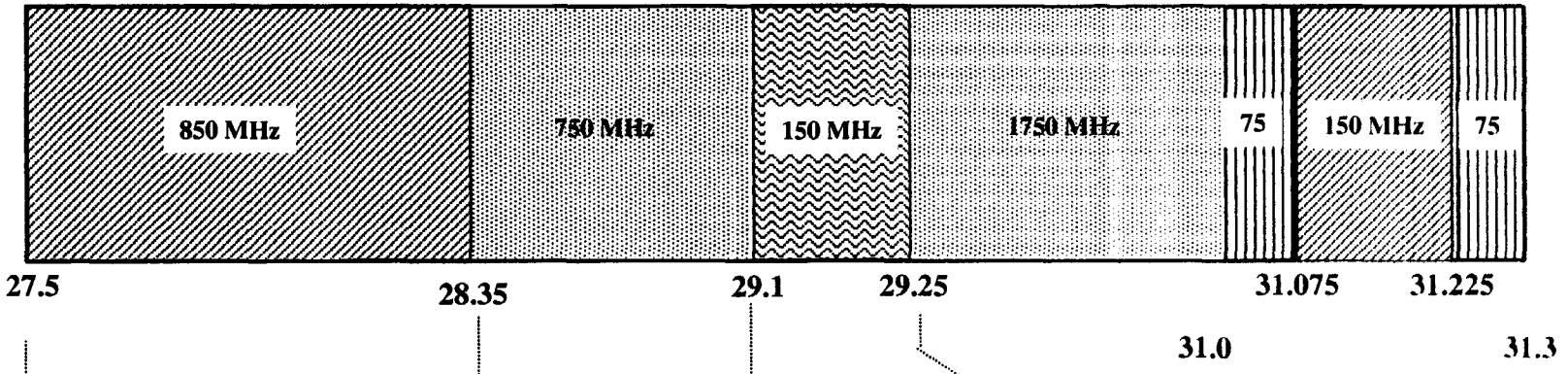
Planning & Implementation



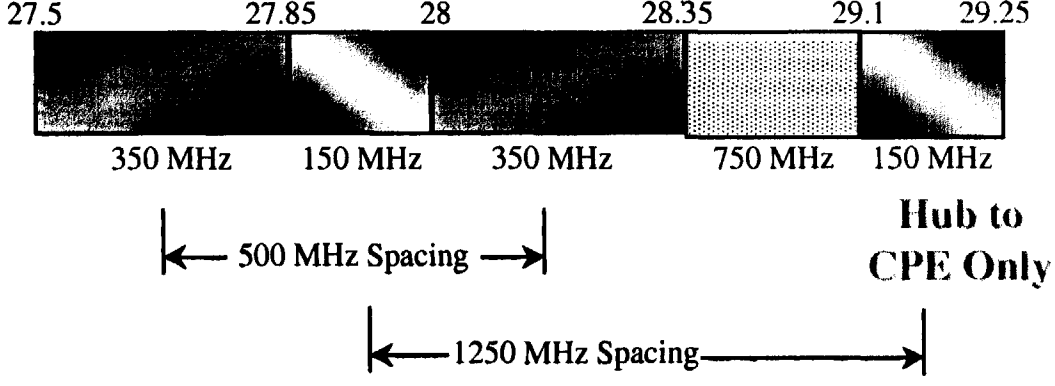
- Similar to cellular deployment
- Implementation consists of:
  - Frequency planning
  - Site Acquisition
  - Zoning
  - Equipment installation
  - Optimization
  - Backhaul Facilities Planning

Alcatel Frequency Plan

Asymmetrical Symmetrical



Symmetrical Channel Plan



Sioux Valley - SW Electric

- ☆ **In late 1980s, obtained MMDS license for one-way analog video as an alternative to cable TV for rural South Dakota**
- ☆ **In January 1998, began to offer one-way internet data over a video channel, with POTS return**
- ☆ **Data customers now require more return bandwidth.**
- ☆ **Customer demand for internet data outpacing video demand. Attempts to obtain LMDS license in auction failed.**
- ☆ **Waiting for approval to provide return channel via MMDS**
- ☆ **Looking for LMDS partitioning or disaggregation partner**

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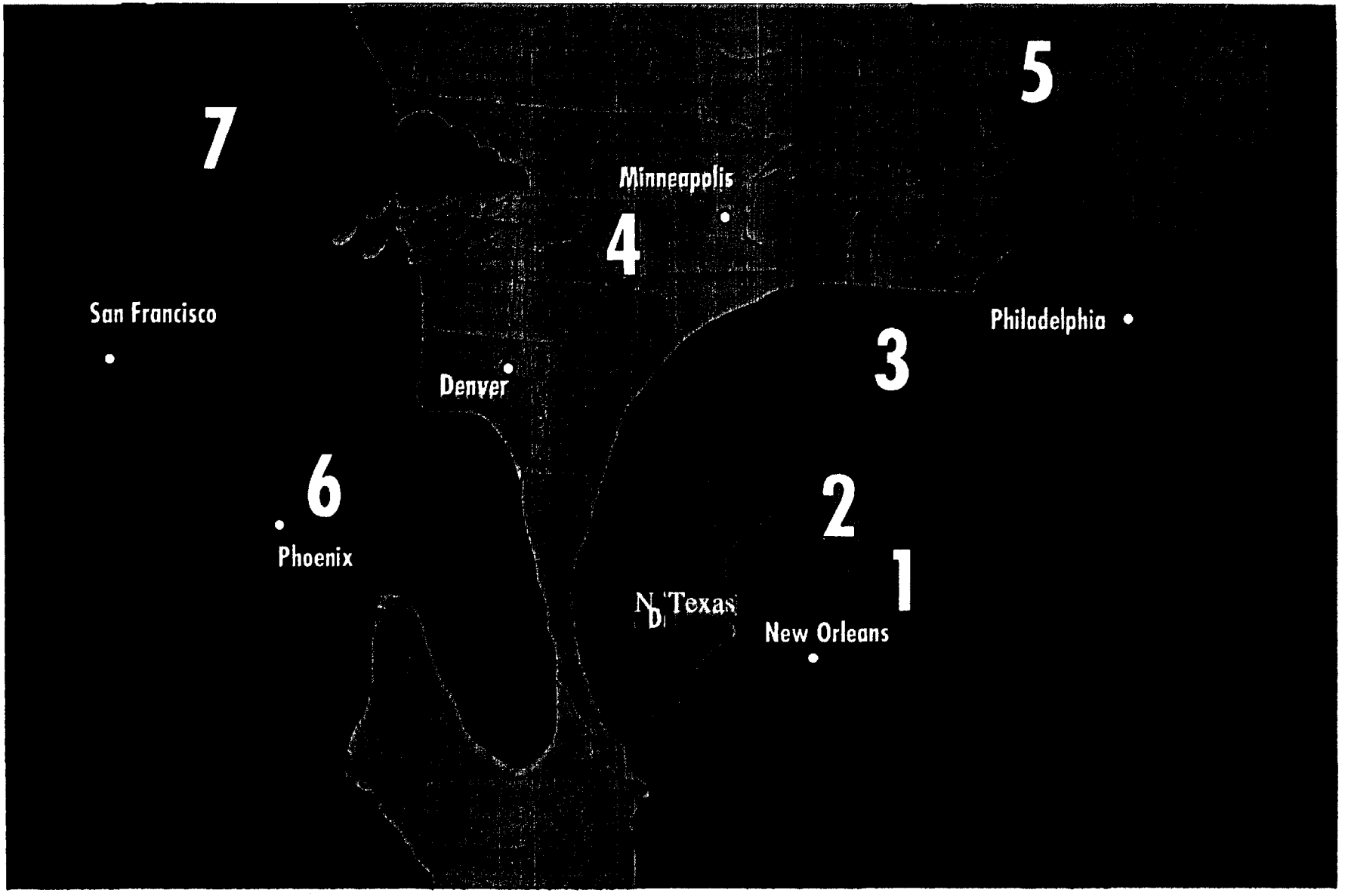
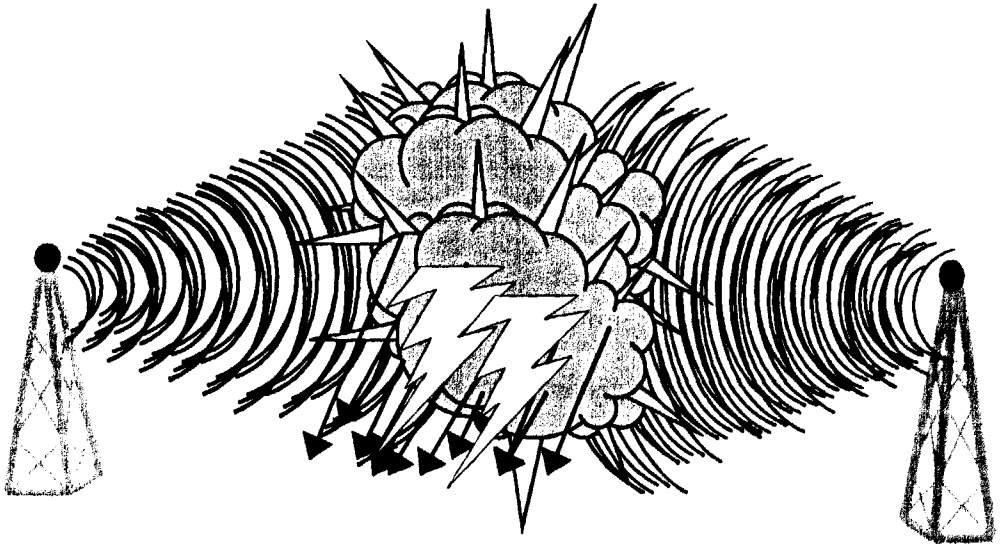
Rain Calculations By Region



28 GHz - How Far Can You GO ??



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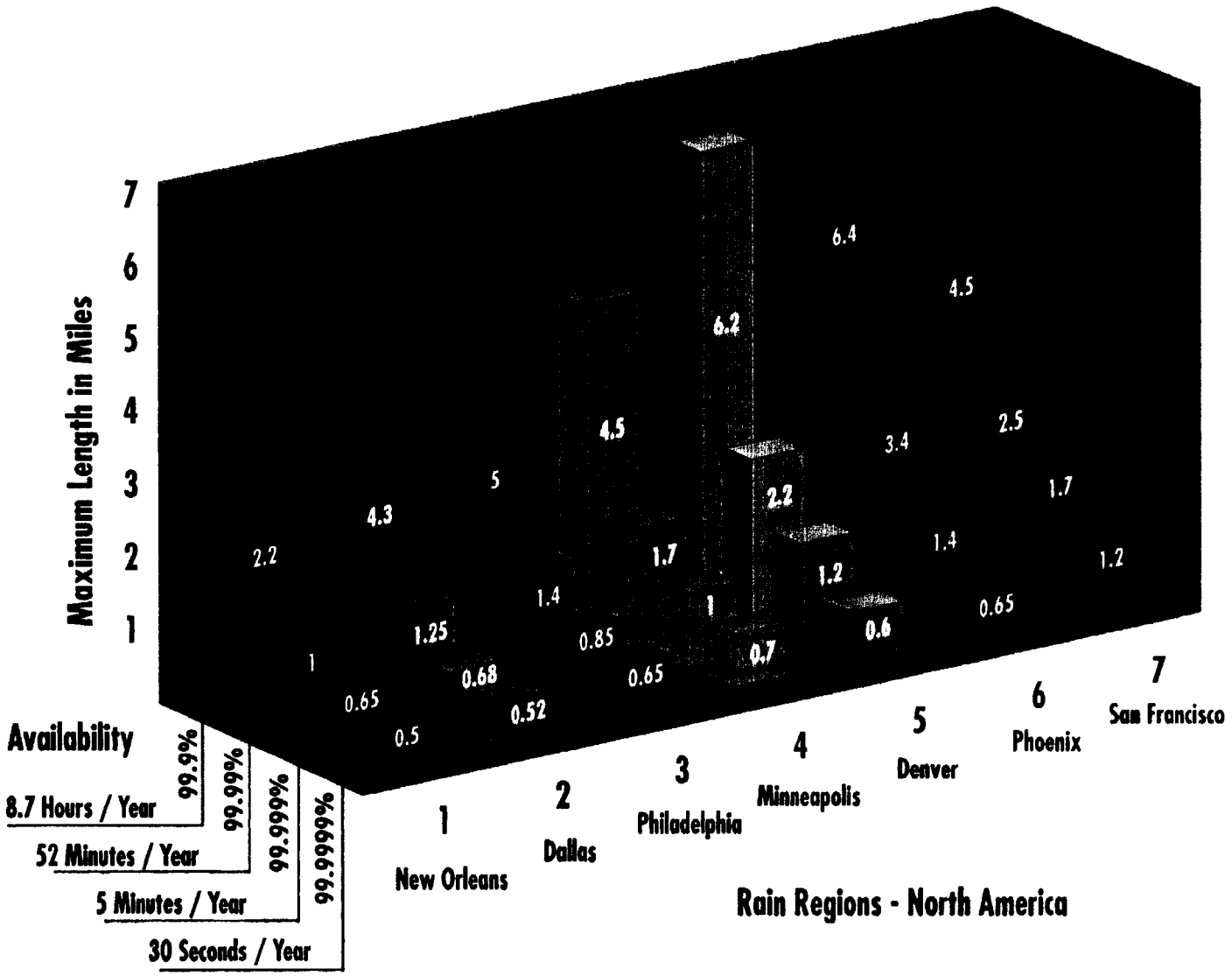
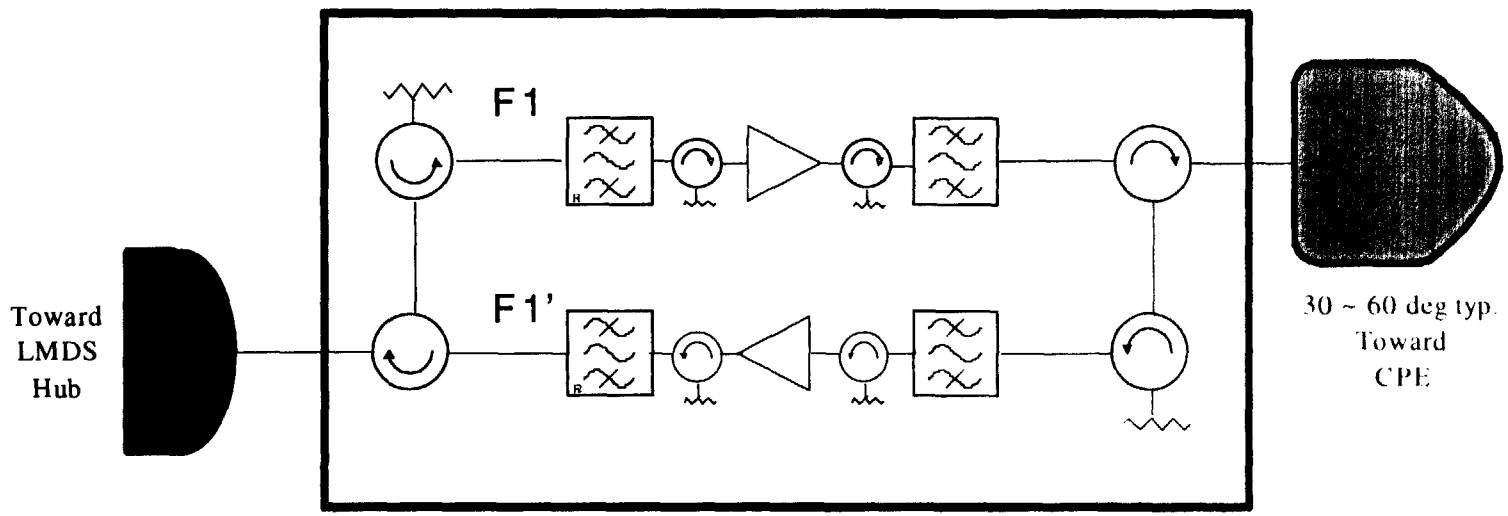


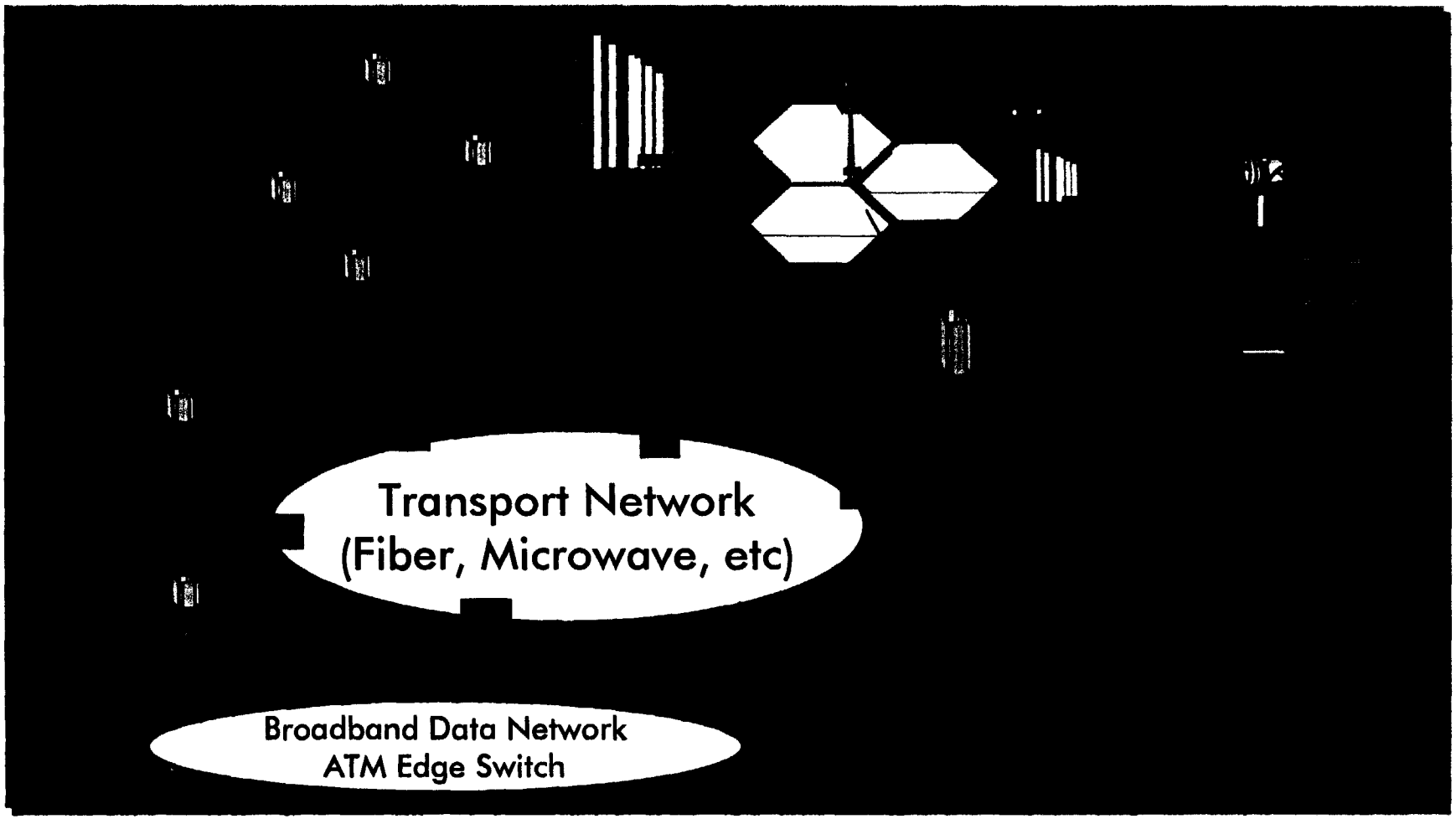
Repeaters

- Extends Coverage Area
- Both Passive and Active Repeaters
- Covers Blind Spots



Tying the Network Together

Alcatel = Full Product Portfolio :
Crossconnects, Point to Point Radios, Fiber, SONET, ATM, etc....



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Customer Economics

Service Provider	Hardware cost	Connection Fee	Installation	Total
@Home	Inc in monthly fee		$99 - $175	$99 - $175
Bell Atlantic (Initial Promotional Pricing)	$99 ($49 w/$50 off coupon to 1st 2000), free Ethernet NIC	$99	Waived during promo	$148-$198
Bell Atlantic	$325 + $50 Ethernet NIC	$99	$99 (inc splitter?)	$573
Pacific Bell (w/1 year contract)	Included	Included	Included	$299 "Home Pack – 1 user", $499 "Internet Access Pack – multi-user"
BellSouth	$199.95 (modem, NIC and splitter)	Included	$99.95	$299.90
US West (w/1 year contract)	$199 (NIC) or $299 (External)	Included	$110	$309 - $409

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Monthly Charges

Service Provider						
@home	Best effort	$29.95 - 49.95				
Bell Atlantic	640k/90k $59.95	1.6M/90k $109.95	7.1M/680k $189.95			
Pacific Bell	384k/128k $59 ADSL $80 ISP	384k/384k $99 ADSL $100 ISP	1.5M/384k $189 ADSL $150 ISP			
BellSouthinc bellsouth.net	Unspecified	rate $59.95				
US West ISP - USWest.net	256 kbps $40.00 xDSL $19.95 ISP	512 kbps $62.40 xDSL $39.95 ISP	768 kbps $76.80 xDSL $49.95 ISP	1M/1M $120	4M/1M $480	7M/1M $840

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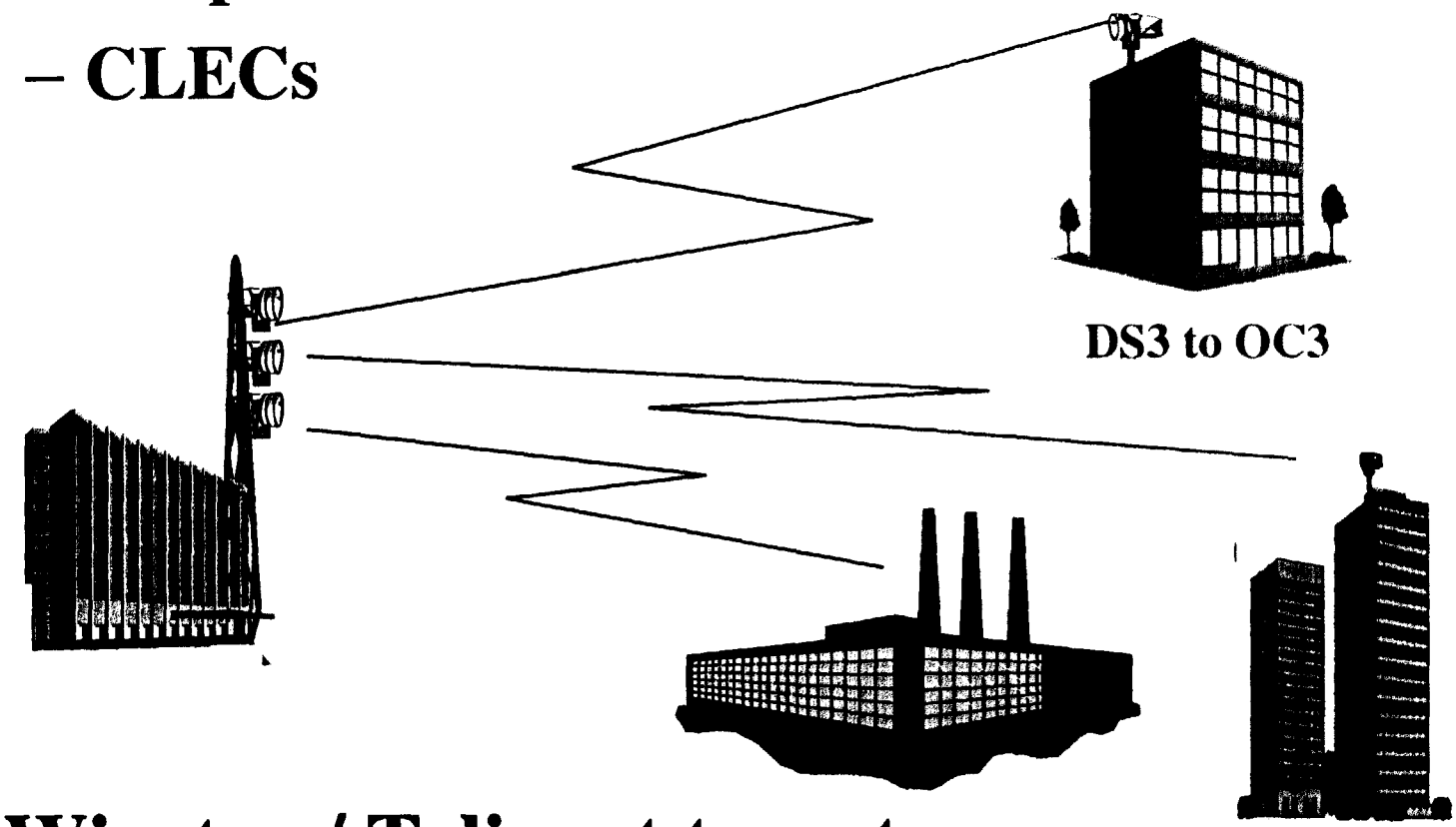
Alternative Technologies

- Point to Point Microwave
- Multipoint Microwave
- Cellular / PCS
- Satellite
- Wireline technologies
  - Cable TV
  - Fiber
  - xDSL

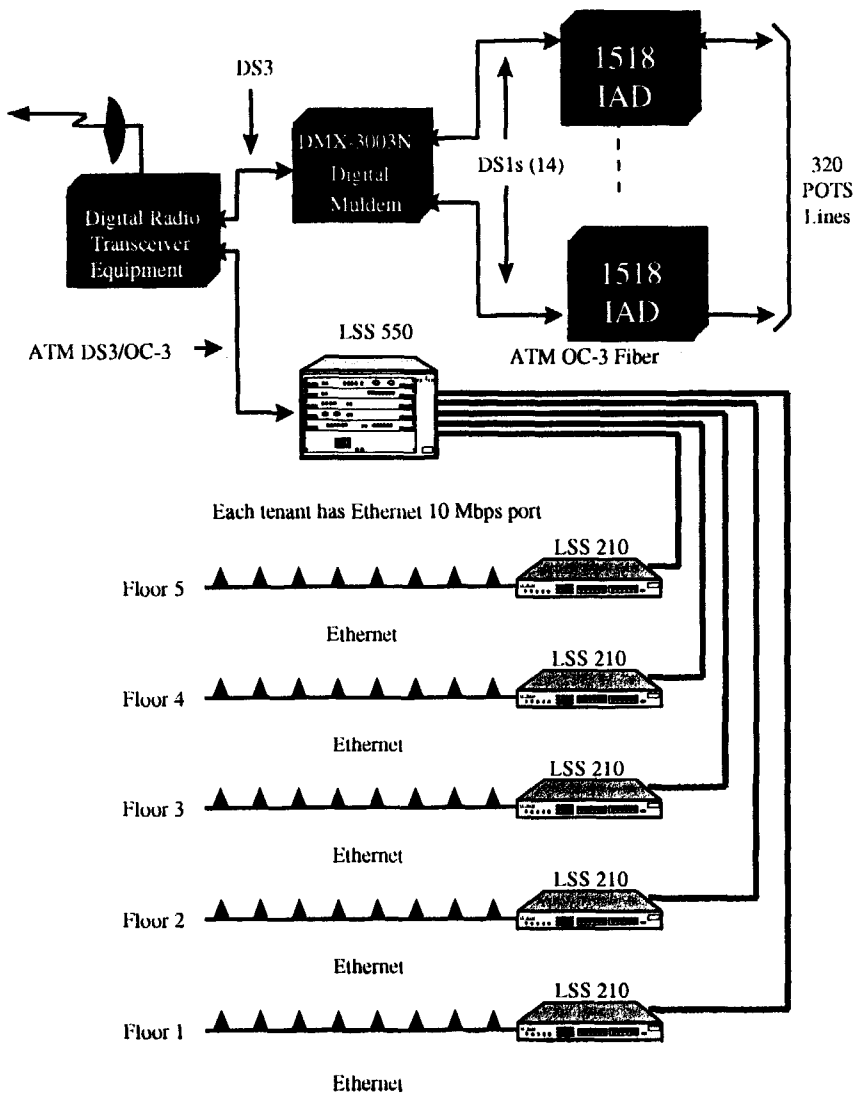
Point to Point Microwave

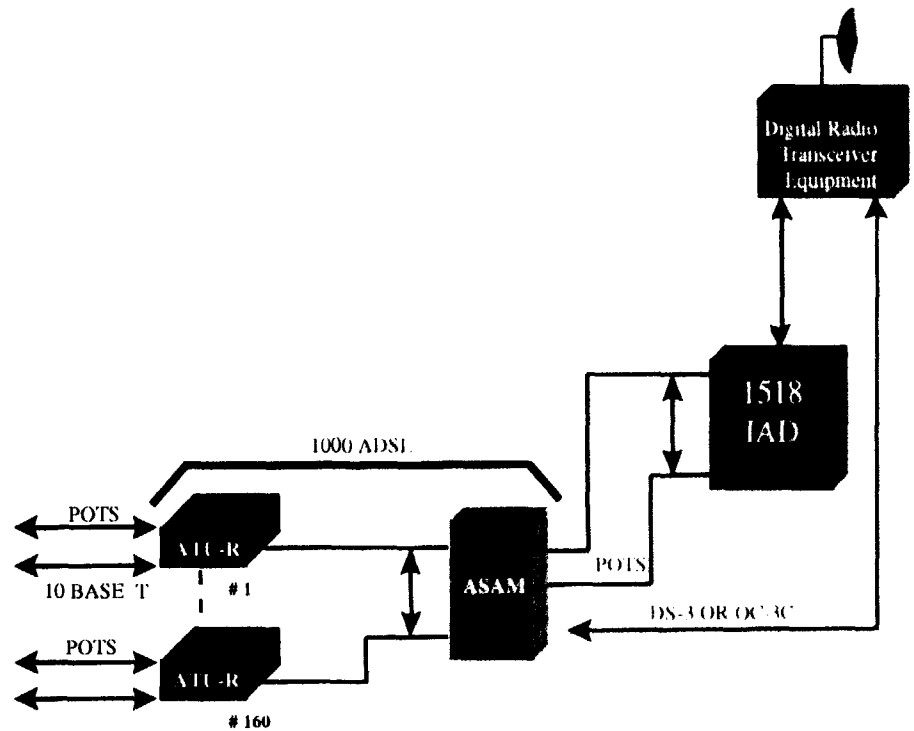
- **Primarily serves large businesses**
  - **Corporate Office Parks**
  - **CLECs**



- **Winstar / Teligent targets**

Large Bandwidth Users





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Winstar

- **Currently operating wireless services in 27 markets**

- **Project Millennium - 1st time customers get free local phone service - up to $1,000 per month until the year 2000. Offer made to more than 1,000 commercial buildings in 13 of 27 markets**

- **Long Distance rates are 9 cents / minute until Feb 1999**

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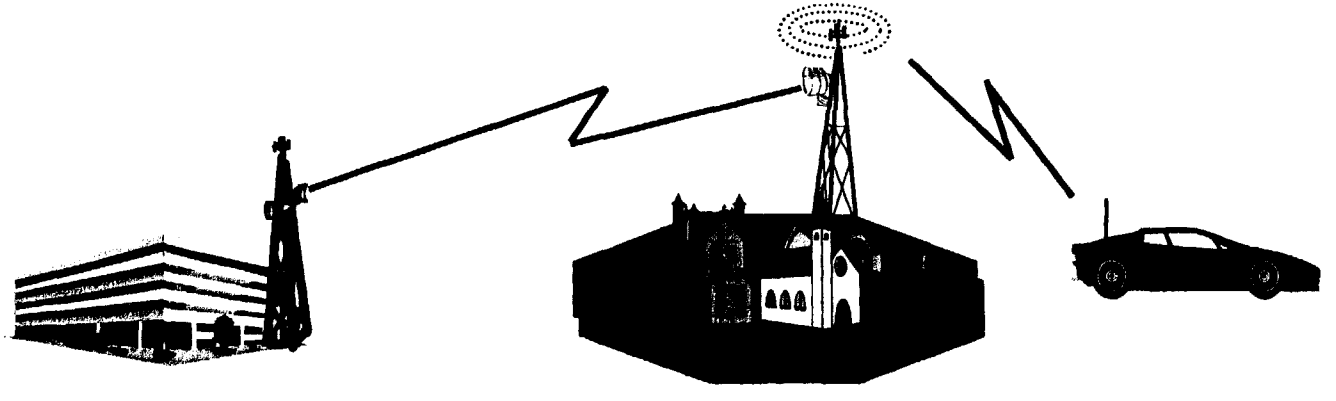
Teligent

- Has launched broadband wireless services (24 GHz) in ten major cities
- Strategy is bundling of integrated services for lower price
- Price Offering = 2 month average of local, long distance & internet charges. Teligent will provide same service at 30% less
- Minimum one year service commitment required

Cellular / PCS - 3G Wireless

- **Goal =** **64 kb/s mobile**
  384 kb/s pedestrian
  2 mb/s fixed
- **5 MHz channels (New Spectrum)**
- **Leading Systems are W-CDMA (GSM Issues)**



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LEO's, MEO's & GEO's

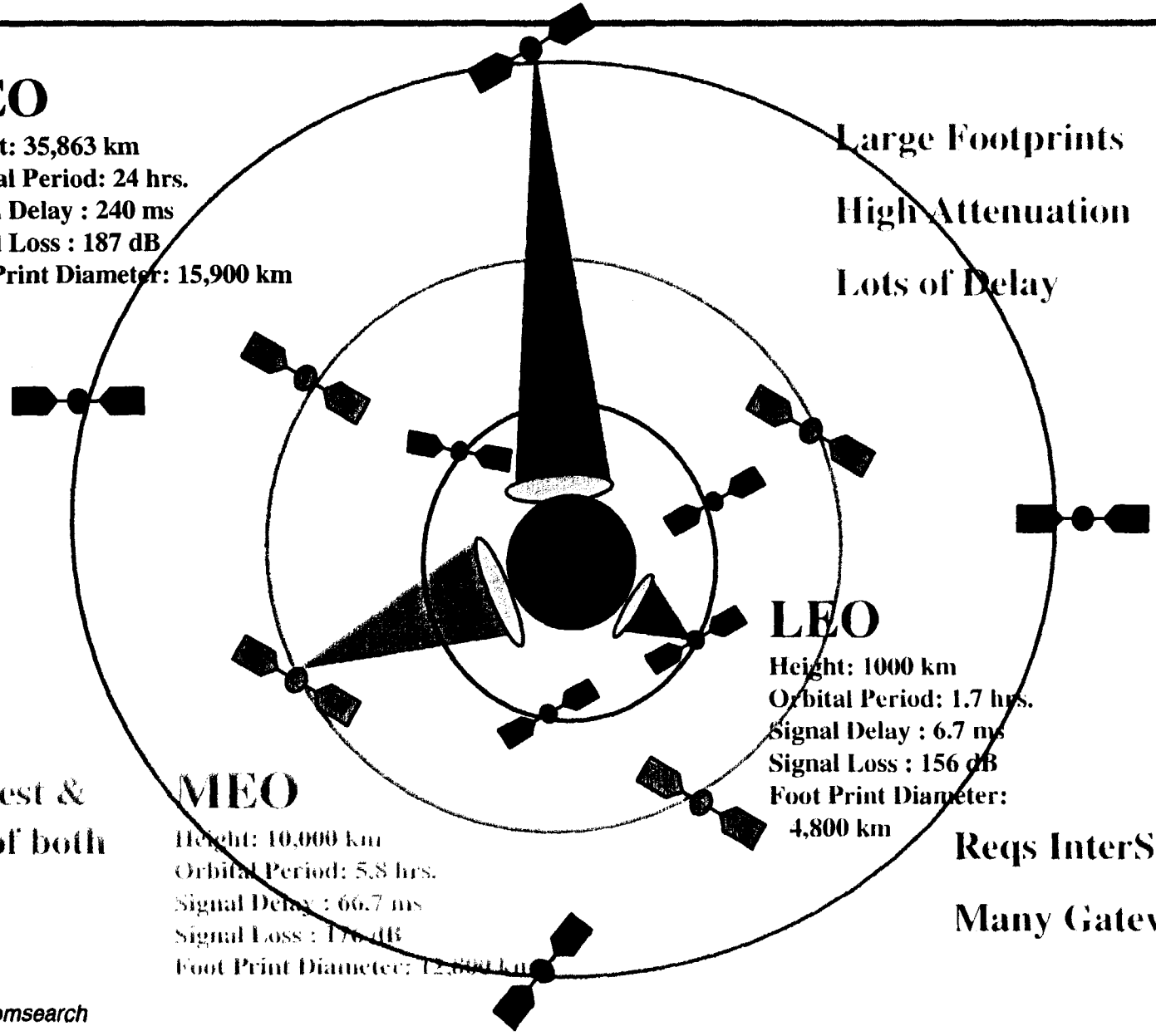
GEO

Height: 35,863 km
Orbital Period: 24 hrs.
Signal Delay : 240 ms
Signal Loss : 187 dB
Foot Print Diameter: 15,900 km

Large Footprints

High Attenuation

Lots of Delay



LEO

Height: 1000 km
Orbital Period: 1.7 hrs.
Signal Delay : 6.7 ms
Signal Loss : 156 dB
Foot Print Diameter: 4,800 km

Reqs InterSat links

Many Gateways

The best & worst of both

MEO

Height: 10,000 km
Orbital Period: 5.8 hrs.
Signal Delay : 66.7 ms
Signal Loss : 176 dB
Foot Print Diameter: 12,800 km

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Alternative Technologies

Wireline buildout

- ❒Civil Engineering Design Cost
- ❒ Construction Cost
- ❒ Right of Way Cost (>construction cost)
- ❒ Stranded Investments Due to Churn
- ❒ Low Penetration = High Subscriber Cost

- ❒ Near 100% Coverage of Selected Area
- ❒ No Radio Distance Limitations.
- ❒ Lower Subscriber Equipment Cost.
- ❒ New Construction does Not Cause Blind Spots.

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Fiber Technology

- **Only about 3-5% of businesses are currently touched with fiber**

- **Fiber upgrade estimates**
  - → **$100 - 200K per mile to extend the fiber link**
  - → **$55K per building to terminate the fiber**

  (Note: even though electronics is coming down the labor to pull fiber is going up)

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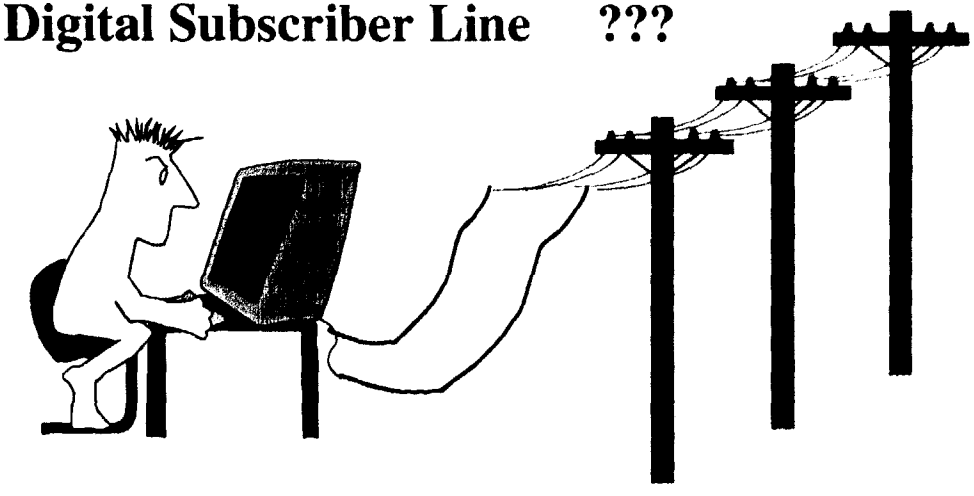
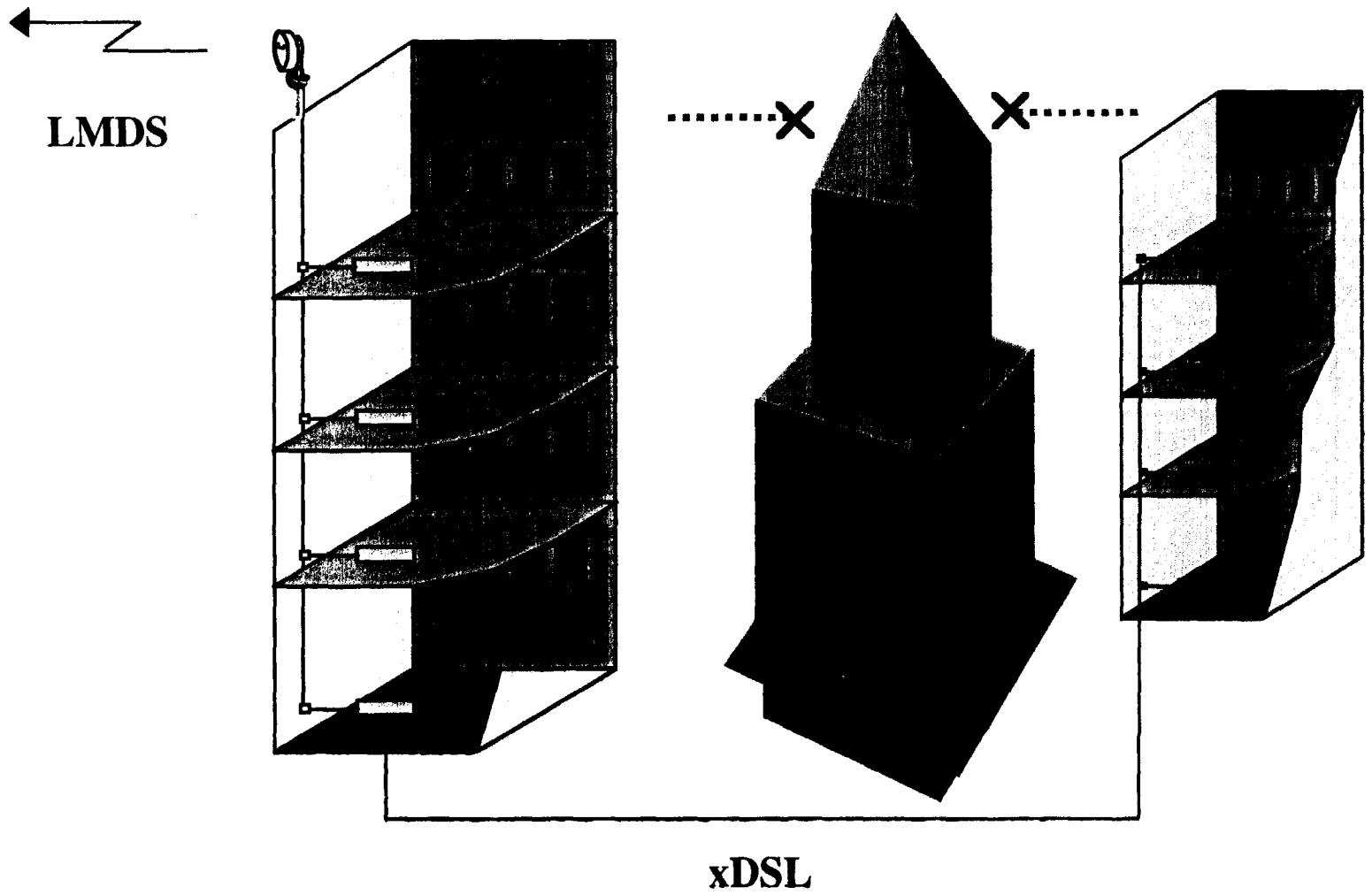
xDSL Vegetable Soup

DSL	**= Digital Subscriber Line**	**~ 160 kb/s**
HDSL	**= High Data Rate Subscriber Line**	**~ 1.5 mb/s**
SDSL	**= Single Line Data Subscriber Line**	**~1.5 mb/s**
ADSL	**= Asymmetrical Data Subscriber Line**	**~9 mb down/ 640k up**
VDSL	**= Very High Data Rate Subscriber Line**	**~ 55 mb/s @1,000'**
IDSL	**= ISDN Digital; Subscriber Line**	**128 kb/s**
RADSL	**= Rate Adaptive Digital Subscriber Line**	**???**



LMDS & xDSL



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Cable TV Alternatives

- Most existing systems are not 2 way
- Systems are already widely deployed
- Large amount of bandwidth in downlink but not necessarily in uplink
- Service concentrated in residential areas
- Major investment for upgrade
- CATV industry is inexperienced in telephony & data applications
- Cable industry is a ash strapped industry facing competition from home satellite
- Must change from regulated monopoly environment
- Reputation for poor customer service

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Vendors by Technology

- ADSL = over 100 vendors
  - in second / third generation development
  - Microsoft has added ADSL drivers to Windows 98
  - Intel has developed new plug and play connector (USB) which could be an ADSL modem connector
  - ADSL Forum in place (over 300 members)
  - according to market research - over 70% of world 750 million phone lines are already ADSL capable
- Cable Modems = 15 vendors
- LMDS = 15-20 vendors
  - in first generation development
  - no standards defined

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Cable Modems

- Planned price reductions for modems ($320 today)
- Industry standards in place
- New generation forecasted as mass marketed items early 1999
- Capable of high bandwidth

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LMDS = Value Added

- Controlled upfront investment
  - ✔ Progressive Investment with Penetration
  - ✔ Low Penetration = Little Effect on Subscriber Cost
- Ease of deployment
- No existing legacy to compromise buildout
- Pricing of access
  - ✔ Control change as the market changes
  - ✔ Known designed performance
- Quick time to market

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LMDS = Value Added

- Quick time to market
- All digital (security / privacy / quality)
- Potential to terminate LD connections
- Disaggregation & Partitioning flexibility
- Reliable transport (quality of service)
- Allows for bundling of services
- High speed metered Data

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LMDS Disadvantages

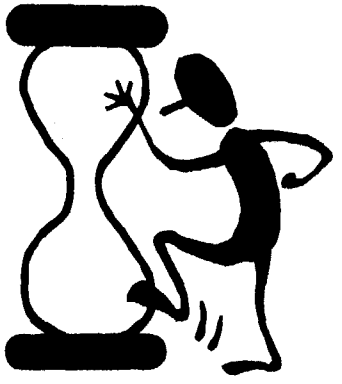
- **Not mature technology**
- **Lack of Business Experience by New Players**
- **Lack of industry technical expertise**
- **Winners have nothing to leverage - business built from bottom up**
- **Public awareness of LMDS is *LOW***
- **Physical distance limitations**
- **Requires Line of Sight**
  - **Coverage Depends on Selected Area**
  - **Vulnerable to blockage due to building construction.**
  - **Working on Cost Effective Solutions**

LMDS = Virtual Reality ?

- ✔ **Vendor Field Trials Currently Underway**
  (Some offering P-P as interim solutions)

- ✔ **Friendly User Trails Just Starting**
  Developing business plans

- ✔ **Limited Roll Out Early 4th Quarter**
  Raising capital & financing



- ✔ **Full Production February 1999**

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Buildout Strategies

Licensees in different stages of planning:

- business plan development
- capital funds raising
- field trial analysis
- buildout quickly in major metropolitan areas and offer a complete line of broadband services
- medium size market strategy
- niche market strategy
- wait and see strategy - until technology is better proven
- partition and disaggregation portions of their network
- bundle local telephony, Internet access and broadcast video

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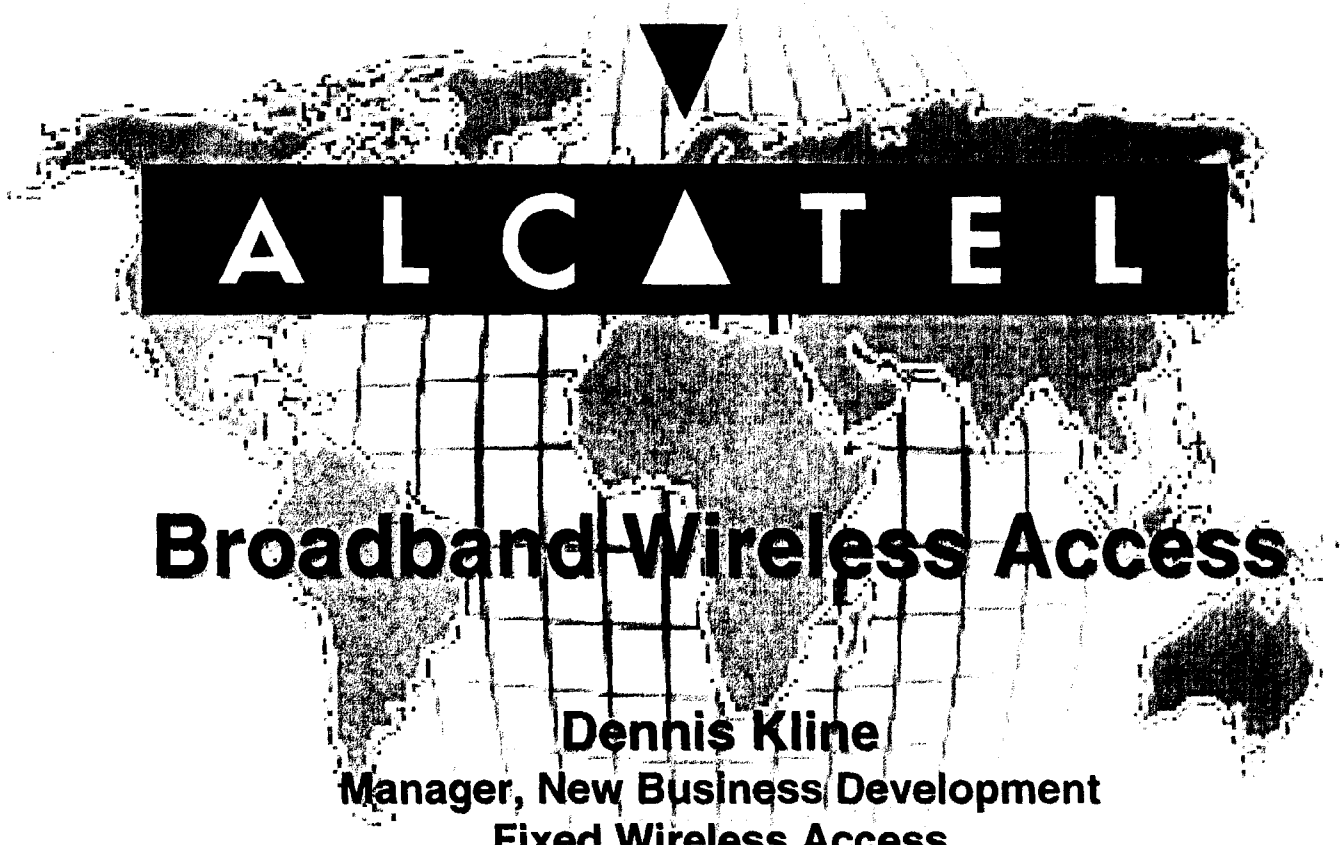
What Can the FCC Do?

- Establish better spectral efficiency rules for point-to-point links
- Fair access to buildings and rooftops
- Addressing local network connectivity
- Foster/encourage partitioning
- Potential problems with MSS feeder links at 29.1-29.25 is concern (exclusion zones)
  - Hub Orbit Avoidance?
  - CPE Location verses MSS up-link transmitters



Broadband Wireless Access

Dennis Kline
Manager, New Business Development
Fixed Wireless Access